Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

The specification and abstract have been reviewed and revised to make a number of editorial revisions. A substitute specification and abstract have been prepared and are submitted herewith. No new matter has been added. Enclosed is a marked-up copy of the specification and abstract indicating the changes incorporated therein.

In addition, claims 1-3 have been amended to make a number of editorial revisions. These revisions have been made to place the claims in better U.S. form. None of these amendments have been made to narrow the scope of protection of the claims, nor to address issues related to patentability and therefore, these amendments should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

A substitute Figure 4 is enclosed herewith correcting two minor typographical errors. No new matter has been added.

Claims 1-3 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Foley (US 5,958,692) in view of Canguilhem (US 3,628,904). This rejection is respectfully traversed for the following reasons.

Claim 1 is patentable over the combination of Foley and Canguilhem, since claim 1 recites a personnel valuation program for permitting a personal computer to function, in part, as:

a means for setting a valuatee group of valuatees to be valuated as a subject of personnel valuation, a valuator group of valuators for performing valuation corresponding to the valuatee group and a valuation item group, as items of valuation;

a means for setting one or more reference valuators from the valuators in the valuator group as at least one reference data valuator;

a means for inputting valuation data of the valuatees by all the valuators in the valuator group including the at least one reference data valuator as initial valuation data; and

a means for adjusting the initial valuation data by the valuators in the valuator group other than the at least one reference data valuator with mean data and a standard

deviation of the valuation data by the at least one reference data valuator as a reference, whereby adjusted valuation data is generated, such that mean data of the adjusted valuation data is identical with the mean data by the at least one reference data valuator and a reference deviation of the adjusted valuation data is identical with the standard deviation of the valuation data by the at least one reference data valuator. The combination of Foley and Canguilhem fails to disclose or suggest all of these features of claim 1.

Foley discloses a method for analyzing attributes of a physical process. The method analyzes data sets to identify sources of variations (i.e., errors) in a response variable associated with the data. In an example of the method, four machines M1-M4 are used to produce two products P1 and P2. Defect data is derived as a ratio of a number of defective products to a number of products produced for each of the machines for each of the products. The method is applied to this data set to identify possible sources of variations in the response variable (i.e., fraction of defective products). The method first organizes the data into populations, the populations being determined by either a single attribute (M1, M2, M3, M4, P1 and P2) or zero or more attributes (e.g., zero attributes equals a universe population or the entire data set). The universe population U is the whole data set and is divided into a number of subpopulations. Then, the method searches for sources of variation by defining a test population as being the universe population. Next, each subpopulation of the universe population is evaluated to determine which of the subpopulations has the most significant variation and whether to choose the subpopulation as a "significant" population. The significance of a population's variation is determined by comparing it with its complement. The complement of a subpopulation with respect to a parent population is all the data which remains in the parent population when the subpopulation is removed.

The comparison of a population to its complement is performed by calculating its Z-Component. The Z-Component is a known statistical approximation for the comparison of probabilities of two binomial distributions and is measured in units of standard deviations. Therefore, the Z-Component of each of the subpopulations is calculated. The method then compares the subpopulation with the highest Z-Component of to a threshold value to determine if it is a significant population. The threshold value

is selected by considering an acceptable level of risk that an identified population may not have an intrinsically higher fraction defective, and therefore, is not a true source of variance. If the Z-Component of the subpopulation having the highest Z-Component does not reach the threshold value, the method is complete as there are no significant sources of variation for the test population, which is the universe population (i.e., the complete data set). However, if the Z-Component of the subpopulation having the highest Z-Component exceeds the threshold value, the highest subpopulation is deemed to be a significant population and becomes the new test population. The method then continues for the subpopulations of the new test population by performing the same calculations described above with respect to the original test population. Once the method discovers a source of variance in the data set, the data is revised to eliminate the source. The revised data set can then be evaluated to determine if other sources of variance exist. (See column 3, line 27 – column 7, line 68 and Figures 1 and 2).

Based on the above discussion, it is apparent that Foley discloses a method for identifying sources of variations among the machines M1-M4 and the products P1 and P2 by grouping them together as a universe population and then separating them into subpopulations base on their respective Z-Components, which are measured as units of standard deviations. However, this differs greatly from what is recited in claim 1.

Initially, it is noted that claim 1 recites a means for setting a valuatee group of valuatees to be valuated as a subject of personnel valuation, a valuator group of valuators for performing valuation corresponding to the valuatee group and a valuation item group, as items of valuation. While it might be arguable that the machines M1-M4 and the products P1 and P2 correspond to the valuatee group, since the machines M1-M4 and the products P1 and P2 are evaluated to identify sources of variance, and the Z-Components correspond to the items of valuation, since they are evaluated, Foley fails to disclose or suggest anything that corresponds to the valuator group of valuators for performing valuation corresponding to the valuatee group. Therefore, Foley fails to disclose or suggest this means for setting.

Since Foley fails to disclose or suggest the valuator group of valuators, Foley necessarily also fails to disclose or suggest a means for setting one or more reference valuators from the valuators in the valuator group as at least one reference data valuator;

a means for inputting valuation data of the valuatees by all the valuators in the valuator group including the at least one reference data valuator as initial valuation data; and a means for adjusting the initial valuation data by the valuators in the valuator group other than the at least one reference data valuator with mean data and a standard deviation of the valuation data by the at least one reference data valuator as a reference, whereby adjusted valuation data is generated, such that mean data of the adjusted valuation data is identical with the mean data by the at least one reference data valuator and a reference deviation of the adjusted valuation data is identical with the standard deviation of the valuation data by the at least one reference data valuator.

In the combination, Canguihem is relied on as disclosing a number of factors that can be used in determining which car to buy and setting parameters for analyzing these factors to generate a single quantitative measure for each of a number of cars. (See column 2, lines 40-59; Column 25 and Column 29). While the rejection indicates that these factors correspond to the valuator group recited in claim 1, it is apparent that this conclusion is not accurate. Claim 1 recites that the valuators in the valuator group are for performing valuation and does not recite that the valuators are things on which valuation is performed. Instead, it is apparent that if the factors disclosed in Canguihem correspond to anything in claim 1, they, at best, would correspond to items of valuation, since they form the basis on which the cars are ranked. As a result, it is apparent that Cahuguihem also fails to disclose the features of claim 1 related to the valuator group discussed above with respect to Foley.

Based on the above discussion, it is apparent that the combination of Foley and Canguilhem fails to disclose or suggest the present invention as recited in claim 1.

Because of the above mentioned distinctions, it is believed clear that claims 1-3 are allowable over the combination of Foley and Canguilhem. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-3. Therefore, it is submitted that claims 1-3 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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PERSONNEL VALUATION PROGRAM

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

This invention relates to a personnel valuation program, which permits an improved appropriateness valuation result to be obtained in personnel valuation in any place of work, in which ~~price~~ wages for labor ~~is~~ are paid.

2. PRIOR ART

In organizations in which ~~price~~ wages for labor ~~is~~ are paid, it is required that the ~~price is~~ wages are appropriate in consideration of the contents and results of labor. The personnel valuation which determines the ~~price~~ wages thus should be appropriate. As a method of obtaining improved appropriateness personnel valuation data, multisided valuation by a plurality of valuators is advocated.

SUMMARY OF THE INVENTION

Heretofore, however, multisided valuation data has been used only as check data against supervisor class valuators who are apt to do impartial valuation and data for demanding self-examination of such valuators. No method has been advocated for processing great quantities of such multisided valuation data so as to be utilized as determinant data of

valuation leading to salary. Except for special work places where the price can be determined solely by numerical data, such as sales data, the personnel valuation inevitably leads to different valuation results with different valuators with ~~whatever way~~ different ways of valuation.

Accordingly, it is an object of the invention to provide a personnel valuation program, which permits ~~producing~~ the production of improved appropriate valuation data by making use of a great quantity of multisided valuation data produced by a plurality of valuators.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram summarizing the invention;

Fig. 2 is a view showing the organization format of multisided valuation data according to the invention;

Fig. 3 is a view showing an image of valuation data according to the invention;

Fig. 4 is a view showing a setting display example on the display for reference data valuator setting, valuatee setting and valuator setting according to the invention;

Fig. 5 is a view showing an example of display of initial valuation data concerning particular valuators and adjusted valuation data obtained by comparing the initial valuation data with data produced by reference value valuators according

to the invention;

Fig. 6 is a view showing an example of display of the result of adjustment and summation of data produced by a plurality of valuators according to the invention; and

Fig. 7 is a view showing an example of calculation result data of individual valuatees according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Fig. 1 shows the procedure of processing according to the personnel valuation program according to the invention, for obtaining improved appropriateness valuation data from a great number of valuation data pieces obtained from multisided valuation.

In the first place, each valuator produces initial prior-to-adjustment valuation data by valuating valuatees on the preamble of a predetermined valuatee group, plural valuator groups corresponding to the valuatee group, a valuation item group and an item weight group corresponding to the item group, and inputting the valuation data thus obtained to a personal computer, in which the personnel valuation program according to the invention is installed, from a keyboard or like input means. This valuation data producing process is shown as process A, a valuation input process, in Fig. 1. Fig. 2 shows the data organization format

of the valuation by each valuator.

The multisided valuation data in Fig. 1 is the aggregation of the valuation data produced by the individual valuators. Fig. 3 shows an overall image of the valuation data. It is shown that the image includes data produced by the valuation of the valuators by the valuatees and vice versa.

In process B in Fig. 1, summation is done in the multisided valuation processing as to the contents of the individual items of valuation of each valuatee by a plurality of valuators. It is also shown that the following plurality of selective settings are possible in subsequent calculating processes.

Fig. 4 shows a setting display example on the display of a personal computer for the plurality of selective settings.

The valuatee setting which is done for the process B in Fig. 1~~,~~ is provided for obtaining results of selecting a desired group of valuatees instead of all the valuatees with respect to the multisided valuation data.

The valuator selection permits production of such reference data as to what valuation trend ~~is~~ a particular valuator group is in, or selection of a valuator or valuators on the basis of a valuation trend index value that is derived from the summation result.

The valuator's weight setting is the setting of a weight,

by which data of a particular valuator among a plurality of valuators is to be multiplied. It is possible to provide different degrees of influence in the summation result according to the magnitude of the weight. In Fig. 4, numerical values 1 to 4 are shown as valuator's weights. For example, the weight of the value 1 is that of the director, ~~that~~ the weight of the value 3 is that of the manager, and ~~that~~ the weight of the value 2 is that of the chief. These weight values are inputted to the "valuator's weight" column in the setting display.

The reference data valuator setting is provided for the calculation, in the process B, of data serving as reference data in the next process C of an individual valuator's trend index calculation. Specifically, valuation data is used as reference data for the calculation. The valuator's weight of each selected valuator or valuators also fulfills the intended effect. When this setting is not done, the full summation result as selected by the valuatee setting, the valuatee setting and the valuator's weight setting, is used as reference data. In Fig. 4, it is shown that three valuators, whom a valuator's weight of 4 is set, are set ~~and~~ as reference valuators. The setting is done by ~~clocking~~ clicking the "No./Reference value" item on the setting display. It is possible to select only one or a plurality of reference

valuators. The reference data valuators are selected for obtaining adequate personnel valuation data, and they may be at posts close to a post competent to make the final personnel decision or other persons.

The exclusion item setting is provided for excluding items, which do not depend on manual valuation, but have objective ranks determined on an objective basis, such as sales amount, sales quantity, net profit amount, production quantity, the production amount and qualification, in process D of the severity adjustment summation.

The reference data valuator setting, the valuatee setting and the valuator setting are selected or not by ~~clocking~~ clicking the pertinent columns on the setting display in Fig. 4.

After the above selective settings, full processing is executed, in which data of the valuators and valuatee are summed up in the process B of the summation shown in Fig. 1. In the process C, the original data of the valuators and the summation result in the process B are compared by using the following equations.

Equation 1 given below is used for calculating the difference of the mean data of the reference data group (i.e., the valuation data by the reference data valuator group) from the mean data of result of valuation of a particular valuatee

group by valuator H with respect to the same valuatee group.

<Equation 1>

AM (H) = AV (H) - AV (T)

where AM (H) is the severity (i.e., difference of the mean valuation of the reference data group from the mean ~~evaluation~~ valuation by the valuator H), H is the valuator number, V is the valuatee number, T is the reference data valuator group (or all selected valuators), AV (H) is the mean point (i.e., mean valuation of the valuator H), and AV (T) is the mean point (i.e., mean valuation of the reference data group).

Equation 2 is used for the calculation, as distribution degree Bu (H), of the ratio between standard deviation SV (H) from the result of valuation of the valuatee group by valuator H and standard deviation SV (T) of valuation data of the reference data valuator group.

<Equation 2>

Bu (H) = SV (H)/SV (T)

where Bu (H) is the distribution degree (i.e., standard deviation ratio), SV (H) is the standard deviation (from valuation by valuator H), and SV (T) is the standard deviation (of the reference data group).

Equation 3 is used by valuator H for calculating the difference KA (V, H) of the total points of the valuatee V by the valuator H from the mean total points.

<Equation 3>

$$KA(V, H) = TP(V, H) - AP(H)$$

where KA (V, H) is the deviation (concerning valuator V), TP (V, H) is the total points of valuation of the valuatee V by the valuator H, and AP (H) is the mean total points of valuation by valuator H.

Equation 4 is used for the calculation, from the above values, of severity CH (V, H) for severity adjusting the rank of valuation of the valuatee V by the valuator H.

<Equation 4>

$$CH(V, H) = AM(H) + KA(V, H) - KA(V, H)/Bu(H)$$

where CH (V, H) is the severity adjustment rank (V, H).

In the process C, which is executed by using the equations 1 to 4, if the valuation answer of each valuator for a valuatee has no answer for all the items, that valuatee is omitted.

For valuatees who have a non-answered item or items, the proportion of the weights of the answered items is used for conversion, and the answered item value is converted to full item answer value.

In process D in Fig. 1, calculation using the following equation 5 is done. Rank R (I) of the original data of item I is adjusted, before the summation, with severity adjustment rank CH (V, H) calculated in the process C.

<Equation 5>

$$Rc(I) = R(I) - CH(V, H)$$

where R (I) is the valuation rank of item I, and Rc (I) is the severity adjustment rank of item I.

Fig. 5 shows an example of display adjusted valuation data obtained as a result of comparison, with respect to the severity and the standard deviation, of particular valuator's original valuation data and reference data valuator's data with respect to the severity and standard deviation. Of 28 valuatees, 20 valuatees are valuated. In the data comparison with respect to the severity and the standard deviation, the standard deviation of the original data was slightly greater than that of the 20 valuatee's reference data and also was slightly severe as a whole, and it is adjusted to obtain the adjusted data as shown.

Fig. 6 shows an example of display of the result of summation of severity adjusted data obtained from data of valuation by a plurality of valuators. Fig. 7 shows an example of calculation result data for individual valuatees.

It will be seen that the personnel valuation program according to the invention can solve the problem in the prior art initial valuation adjusting means using mean data that, when the initial valuation data includes ~~much~~ greatly deviated data, the mean data itself is greatly affected by the deviated

data if the reference data for the adjustment is obtained by purely averaging the valuation data obtained by the full valuators. It is thus possible to obtain more appropriate valuation data.

As has been described in the foregoing, with the personnel valuation program according to the invention, it is possible to make use of great quantity data of multisided valuation by a plurality of valuators and adjust the initial valuation data having such deviation trend as being excessively ~~severer~~ severe or excessively less ~~severer to apt~~ severe and generate more appropriate valuation data by using reference data.

In addition, the provision, in a personal computer, of the means for setting a valuator's weight for multiplying the valuation data thereby in dependence on the post of a valuator or valuators in the valuator group who can do appropriate valuation, the valuation data by the valuator or valuators at a post that ~~he~~ he/she or they can do appropriate valuation, is more greatly reflected on the summation of the full valuation data, and it is thus possible to obtain still more appropriate valuation data.

Furthermore, since the reference data valuators are selected for obtaining appropriate personnel valuation data and also since the setting of reference data by the reference

data valuators is done with respect to the valuation data of the whole valuatee group about all the valuation items, it is possible to have valuation data by persons who can appropriately grasp and valuate ~~al~~ all of the valuatee group as ~~apt~~ reference data.

ABSTRACT

An effective personnel valuation program ~~is provided, which~~ permits an improved appropriateness valuation result to be obtained by adjusting deviation of valuation by individual valuators from a standard.

Valuators at posts able to ~~do~~ perform appropriate valuation are set as reference data valuators. Initial valuation data produced by valuators in a valuator group other than the reference data valuators are adjusted such that its mean data is identical with the mean data of the valuation data produced by the reference data valuators with the mean data and the standard deviation of the valuation data by the reference data valuators as references. Also, standard deviation fluctuations of the valuation data are adjusted such that the standard deviation is identical with the standard deviation of the valuation data produced by the reference data valuators.